

**REMARKS**

Applicants respectfully request reconsideration of the present application in view of the foregoing amendments and in view of the reasons that follow. Claims 26, 28, 34, 36, 42, 44 and 53-55 have been amended, and Claims 27, 35, and 43 have been canceled. No new matter has been added. Claims 1-25, 29, and 37 were previously canceled. Claims 26, 28, 30-34, 36, 38-42, and 44-55 are now pending in this application.

**I. Claim Rejections Under 35 U.S.C. § 103(a)**

On page 2 of the Final Office Action, Claims 26, 27, 31-35, 39-43, 45, and 50-55 were rejected under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent Application Publication No. 2002/01679931 to Jang et al. (hereinafter “Jang”) in view of U.S. Patent No. 6,256,334 to Adachi (hereinafter “Adachi”). On page 9 of the Final Office Action, Claims 28, 36, and 44 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Jang and Adachi in view of U.S. Patent Application Publication No. 2003/0206561 to Schmidl et al. (hereinafter “Schmidl”). On page 10 of the Final Office Action, Claims 30, 38, and 46 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Jang and Adachi in view of U.S. Patent No. 6,333,937 to Ryan (hereinafter “Ryan”). On page 11 of the Final Office Action, Claims 47 and 48 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Jang and Adachi in view of U.S. Patent No. 7,110,472 to Sakoda et al. (hereinafter “Sakoda”). On page 13 of the Office Action, Claim 49 was rejected under 35 U.S.C. § 103(a) as being unpatentable over Jang and Adachi in view of U.S. Patent Application Publication No. 2003/0078006 to Mahany (hereinafter “Mahany”). Independent Claims 26, 34, and 42 have been amended. Applicants respectfully submit that the Jang, Adachi, Schmidl, Ryan, Sakoda, and Mahany, alone or in combination, fail to disclose, teach, or suggest at least one element recited in each of independent Claims 26, 34, and 42.

Amended independent Claim 26 recites, in part (with emphasis added):

monitoring an energy level of a monitored frequency band of a selected frequency hopping pattern; and

transmitting data on a transmit frequency band of said selected frequency hopping pattern if said energy level indicates a particular condition of said monitored frequency band, wherein said transmit frequency band is different from said monitored frequency band....

Although different in scope, independent Claim 34 recites similar elements. Amended independent Claim 42 recites, in part (with emphasis added):

a transmit module coupled to the timing controller to receive an indication to transmit data in a transmit frequency band of the selected frequency hopping pattern, wherein said transmit frequency band is different from said monitored frequency band, and wherein said indication is to be generated by the timing controller in response to the timing controller determining the particular condition has been satisfied by the monitored frequency band.

Applicants respectfully submit that Jang, Adachi, Schmidl, Ryan, Sakoda, and Mahany, alone or in combination, fail to disclose, teach, or suggest such elements.

On page 10 of the Final Office Action dated March 23, 2009, the Examiner acknowledged that Jang and Adachi fail to teach that “said transmit frequency band is different from said monitored frequency band,” as recited in Claim 28. Instead, the Examiner relied on paragraph [0060] of the Schmidl reference for its alleged disclosure of such an element.

Schmidl is directed to a “data encoding algorithm [that] can be used (120) to generate overhead bits from original data bits, and the original data bits and overhead bits can be transmitted in respectively separate transmissions (121, 123), if the overhead bits are needed” (Abstract). Paragraph [0060] of Schmidl states (with emphasis added):

FIG. 3 summarizes the parameters for mode 2 and also compares it to mode 1. An exemplary symbol rate for mode 2 is 0.65 Msymbols/sec. (other rates are also available) giving a bit rate of 2.6 Mbits/sec for 16 QAM (16-ary quadrature amplitude modulation) and 3.9 Mbits/sec. for 64 QAM (64-ary quadrature

amplitude modulation). The transmit spectrum mask for mode 2 can be, for example, the same as Bluetooth, as shown in FIG. 4. For FIG. 4, the transmitter is transmitting on channel M and the adjacent channel power is measured on channel N. The FIG. 4 spectrum mask can be achieved, for example, by a raised cosine filter of  $a = 0.54$  and a 3 dB bandwidth of 0.65 MHz for the symbol rate of mode 2.

As such, Schmidl discloses that the “transmitter is transmitting on channel M and the adjacent channel power is measured on channel N.” However, like Jang and Adachi before, Schmidl fails to provide any indication that a decision to transmit data on a first frequency band is based on “if [an] energy level [of a second different frequency band] indicates a particular condition of [that second different frequency band],” as recited in Claim 26. Instead, Schmidl merely states that “transmitting” is performed on “channel M” and that an “adjacent channel power is measured on channel N.” However, Schmidl does not appear to indicate that a decision to transmit data on “channel M” is based on “an energy level” of “channel N” or a particular condition of “channel N” indicated by such an “energy level.” Moreover, the combination of Jang, Adachi, and Schmidl also fails to provide such a teaching. Accordingly, Applicants respectfully submit that Jang, Adachi, and Schmidl, alone or in combination, fail to disclose, teach, or suggest “transmitting data on a transmit frequency band of said selected frequency hopping pattern if said energy level indicates a particular condition of said monitored frequency band, wherein said transmit frequency band is different from said monitored frequency band,” as recited in Claim 26 (and similar elements recited in the other independent claims).

Ryan, Sakoda, and Mahany fail to cure the deficiencies of Jang, Adachi, and Schmidl. On page 11 of the Final Office Action, the Examiner relied on Ryan for its allegation of a “method wherein data comprises one or more orthogonal frequency-division multiplexing (OFDM) symbols.” Ryan is directed to an “access retry method for shared channel wireless communication links” (Title). However, Ryan, alone or in combination with the other applied references, fails to disclose, teach, or suggest “transmitting data on a transmit frequency band of said selected frequency hopping pattern if said energy level indicates a particular condition of said monitored frequency band, wherein said transmit frequency band is different from said

monitored frequency band,” as recited in Claim 26 (and similar elements recited in the other independent claims).

On page 12 of the Final Office Action, the Examiner relied on Sakoda for its alleged disclosure of a “transmit buffer coupled to receive said indication from the timing controller” and a “transform device … to provide an output signal.” Sakoda is directed to a “receiver for generating a transmission symbol stream by applying predetermined modulation processing to an encoded bit series obtained by encoding an information bit series having a predetermined transmission rate” (Abstract). However, Sakoda, alone or in combination with the other applied references, fails to disclose, teach, or suggest “transmitting data on a transmit frequency band of said selected frequency hopping pattern if said energy level indicates a particular condition of said monitored frequency band, wherein said transmit frequency band is different from said monitored frequency band,” as recited in Claim 26 (and similar elements recited in the other independent claims).

On page 13 of the Final Office Action, the Examiner relied on Mahany for its alleged disclosure of a “device wherein said one or more detection signals comprise one or more signals indicating one or more transitions in an energy level of the monitored frequency band.” Mahany is directed to a “[r]emote radio data communication system with data rate switching” (Title). However, Mahany, alone or in combination with the other applied references, fails to disclose, teach, or suggest “transmitting data on a transmit frequency band of said selected frequency hopping pattern if said energy level indicates a particular condition of said monitored frequency band, wherein said transmit frequency band is different from said monitored frequency band,” as recited in Claim 26 (and similar elements recited in the other independent claims).

For at least the reasons above, Applicants respectfully submit that Jang, Adachi, Schmidl, Ryan, Sakoda, and Mahany, alone or in combination, fail to disclose, teach, or suggest at least one element recited in each of independent Claims 26, 34, and 42 (and their various associated dependent claims). Applicants therefore request reconsideration and withdrawal of the rejection of Claims 26-28, 30-36, and 38-55 under 35 U.S.C. § 103(a).

\* \* \*

It is submitted that each outstanding objection and rejection to the Application has been overcome, and that the Application is in a condition for allowance. Applicants respectfully request consideration and allowance of all pending claims.

It should also be noted that although arguments have been presented with respect to certain claims herein, the recited subject matter as well as various other subject matter and/or combinations of subject matter may be patentable for other reasons. Further, the failure to address any statement by the Examiner herein should not be interpreted as acquiescence or agreement with such statement. Applicants expressly reserve the right to set forth additional and/or alternative reasons for patentability and/or allowance with the present Application or in any other future proceeding, and to rebut any statement presented by the Examiner in this or other papers during prosecution of the present Application.

The Examiner is invited to contact the undersigned by telephone if it is felt that a telephone interview would advance the prosecution of the present Application.

The Commissioner is hereby authorized to charge any additional fees which may be required regarding this Application under 37 C.F.R. §§ 1.16-1.17, or credit any overpayment, to Deposit Account No. 19-0741. Should no proper payment be enclosed herewith, as by the credit card payment instructions in EFS-Web being incorrect or absent, resulting in a rejected or incorrect credit card transaction, the Commissioner is authorized to charge the unpaid amount to Deposit Account No. 19-0741. If any extensions of time are needed for timely acceptance of papers submitted herewith, Applicants hereby petition for such extension under 37 C.F.R. §1.136 and authorizes payment of any such extensions fees to Deposit Account No. 19-0741.

Respectfully submitted,

By



Nicholas M. Lagerwall  
Attorney for Applicants  
Registration No. 63,272

Date: December 28, 2011

FOLEY & LARDNER LLP  
Customer Number: 23524  
Telephone: (608) 258-4466  
Facsimile: (608) 258-4258